

Work Order ID 86064

June-20-12 12:52:12 PM

86064

Page 1

Item ID: D6013-047

Revision ID:

Item Name: Skidtube Material

Start Date: 20/06/2012 Start Qty: 60.00

Required Date: 15/08/2012 Req'd Qty: 60.00

Reference:

Approvals: Process Plan: *MLJ*

QC:

Date: *12/06/20* Tooling:

Date: SPC (Y/N):

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D6013

Rev A

100

0.00

100

Purchasing

PURCHASING

Memo

0.00

Purchasing

Issue P/O: *17288* a) Extrude as per Dwg D6013b) Material:
7075-T73/T73510/T73511 (QQ-A-200/11) Seamless Aluminum Tubec)
Minimum ultimate tensile strength = 66 ksid) Minimum tensile yield strength
= 56 ksiPossible Supplier: Aluminum WorksMate

110

Rccive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6006

DAS
16
9-89

Bl 06/27

124

124X

13-5-30

CL 12/06/22 1.28

*128 CL 12/06/22 (92) *60* *60**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86064

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Item ID: D6013-047
Revision ID:
Item Name: Skidtube Material

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 20/06/2012 Start Qty: 60.00
Required Date: 15/08/2012 Req'd Qty: 60.00

60

Cust Item ID:

60

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

Chemical Conversion Coat per OSI005 41

0.00

130

HandFinish

Memo

0.00

Hand Finishing

140

QC3- Inspect Part Finish

0.00

140

QC

Memo

0.00

Quality Control

150

Identify as per dwg & Stock Location: LG

0.00

150

Packaging

Memo

0.00

Packaging

BB/08/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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June-20-12 12:52:12 PM

Item ID: D6013-047
Revision ID:
Item Name: Skidtube Material

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Start Date: 20/06/2012 Start Qty: 60.00
Required Date: 15/08/2012 Req'd Qty: 60.00

60

Cust Item ID:

60

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.00

Quality Control

13/8/29 *[Signature]*

13-08-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 86064

86064

Parent Item: D6013-047

D6013-047

Parent Item Name: Skidtube Material

Start Date: 20/06/2012

Required Date: 15/08/2012

Start Qty: 60.00

Required Qty: 60.00

Comments: IPP A05.08.31New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6013-047P		Purchased	No			110	Each	0.0000	1	60			
D6013-047P										**	124x	13-5-30	
SKIDTUBE MAT'L											88.		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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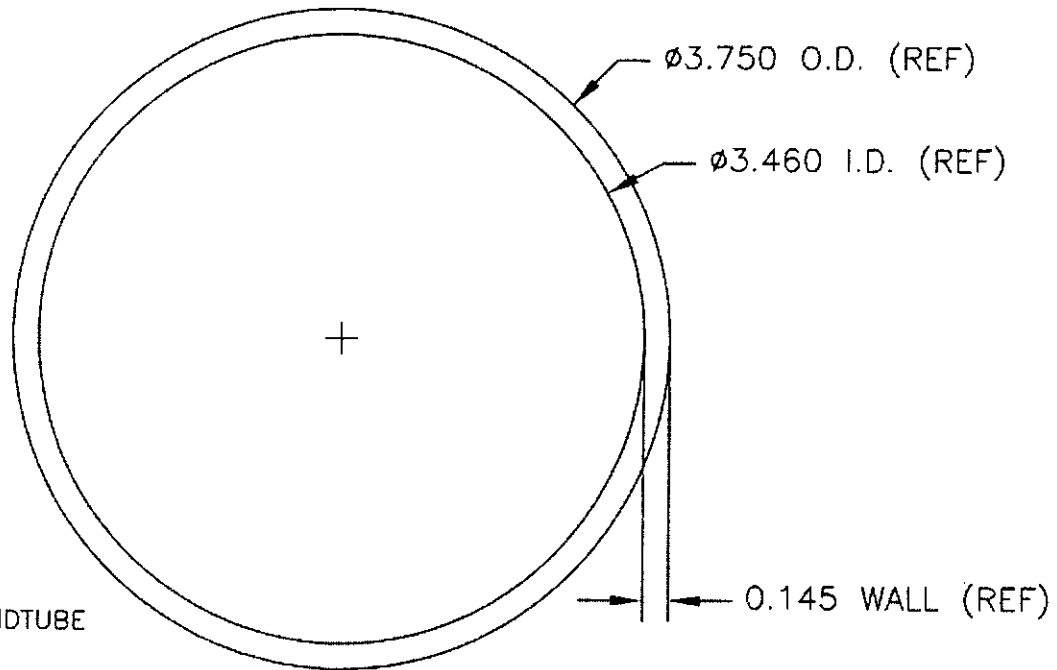
NOTE: Date & initial all entries

DART

DESIGN PH	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED #	APPROVED #	DRAWING NO. D6013	REV. A SHEET 1 OF 1
DATE 05.03.18	TITLE SKIDTUBE MATERIAL		SCALE 1:1
A	05.03.18	NEW ISSUE	

RELEASED
11-05-08 09 #

SPECIFICATION CONTROL DRAWING



NOTES

- 1) D6013-XXX SKIDTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 47" LONG TUBE: D6013-047

- 2) MATERIAL: 3.750 OD x 0.145 WALL 7075-T73/T73510/T73511 PER QQ-A-200/11 SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 66 ksi
MINIMUM YIELD TENSILE STRENGTH = 56 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.008 MEAN (± 0.016 INCLUDING OVALITY)
WALL: ± 0.006 MEAN (± 0.015 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.188/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 260004 MJS
12/06/20

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W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Boxmarking:

Dart Aerospace Po. 17288
D6013 - 047
Made in Germany Dest.: Hawkesbury Ont, Canada

[illegible]

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

Kunde: Dart Aerospace Ltd.
Client:

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 229/13

Cert No. / No. du certificat:

Po17288

Bestellnummer:

Order No. / No. de commande

Auftrag: 46982/400

Our Reference/Notre Reference:

Produkt: Rohre nahtlos gepresst und gezogen
Product / Produit: Tubes seamless extruded and drawn

Spezifikation: -; AMS - WW - T - 700/7; -; -;
Specification:

Werkstoff: 7075
Alloy/Alliage:

Zustand: T 73
Temper/État

Abmessung: 3,750 INCH x 3,460 INCH x 0,145 INCH x 47,000 INCH
Size / Dimension: D6013-047 3.750 X 0.145 X 47

Kennzeichnung: ALUnna - Cert No. 229/13 - 7075-T73 - Cast No.- AMS WWT 700/7 - 3.750" OD X 0.145" Wall - Heat Lot No. 1401553 - ALUnna
Marking/Marquage: Order Conf. No. 46982/400-1 PO. 17288

Lieferung

Delivered Material / Matériel délivré:

pcs.

lbs

Country of Manufacture: Germany

Products are in accordance with applicable RoHS

1. Chemische Analyse

Chemical Analysis / analyse chimique

Other elements
each max. 0,05 %, total 0,15 %

Charge/ Cast No.	min.	max.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
8859/13			0,088	0,171	1,475	0,049	2,587	0,221	5,640	0,039	0,003	0,0221	0,0001	0,0017	0,0001

Hydrogen content: 0,10

ccm/100 g Al Elements without indication < 0,01 %

country of melt manufacturer: Germany

8774/12	0,084	0,165	1,565	0,040	2,501	0,216	5,790	0,037	0,004	0,0209	0,0001	0,0019	0,0001
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Hydrogen content: 0,08

ccm/100 g Al Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No.
min. max.	66,0	56,0				
1	76,705	65,250				1401553
2	76,270	64,960				
3	75,835	64,525				
4	75,545	64,380				

Delivery according to your special release of 20.02.2013

electrical conductivity: 38,0 % IACS

max. RMS 24 - max. 15,0 µ"

Ergebnis der Prüfungen:

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

WieseI



Certified acc. DIN EN ISO 9001:2008 and DIN EN 9100:2003
valid until 2013-11-10

Cert.- Reg. No.: 001959 QM08; 001959 ASH



ALUnna

Handwritten signature

Abnahmebeauftragter

26.03.2013

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO17288

Purchase Order Date 6/22/12

PO Print Date 6/22/12

Page Number 1 of 2

Order From :

VU-ALU001

ALUMINIUMWERK UNNA AG
630 3033 SOUTH PARKER RD
AURORA, CO 80014
USA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	303 755 5672	Requisition Nbr	
Vendor Fax	303 755 5936	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Wire
		Currency	USD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA



Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6013-047P	SKIDTUBE MAT'L	12/21/12 Yes	128.00 Each	Yours ppd	\$134.0000	\$17,152.00
		Special Inst: EXTRUDE AS PER DWG D6013 REV. A B86064 MATERIAL: 7075-T73/T73510/T73511 (QQ-A-200/11) SEAMLESS ALUMINUM TUBE MIN ULTIMATE TENSILE STRENGTH=66ksi MIN TENSILE YIELD STRENGTH=56 ksi					
2	D6014-090P	ALUMINUM EXTRUSION	12/21/12 Yes	80.00 Each	Yours ppd	\$642.0000	\$51,360.00

REC 36 4/3/3/20
REC 124X SP135
REC 93 86063 1/13/1/3

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required - YES NO

Change Nbr: 1

Change Date: 6/22/12

